AMENDMENTS TO THE CLAIMS

Please amend the claims in above-identified patent application as shown on the Claims Listing appended hereto.

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Attorney docket: RDID 00105

CLAIMS LISTING 8/23/2004

What is claimed is:

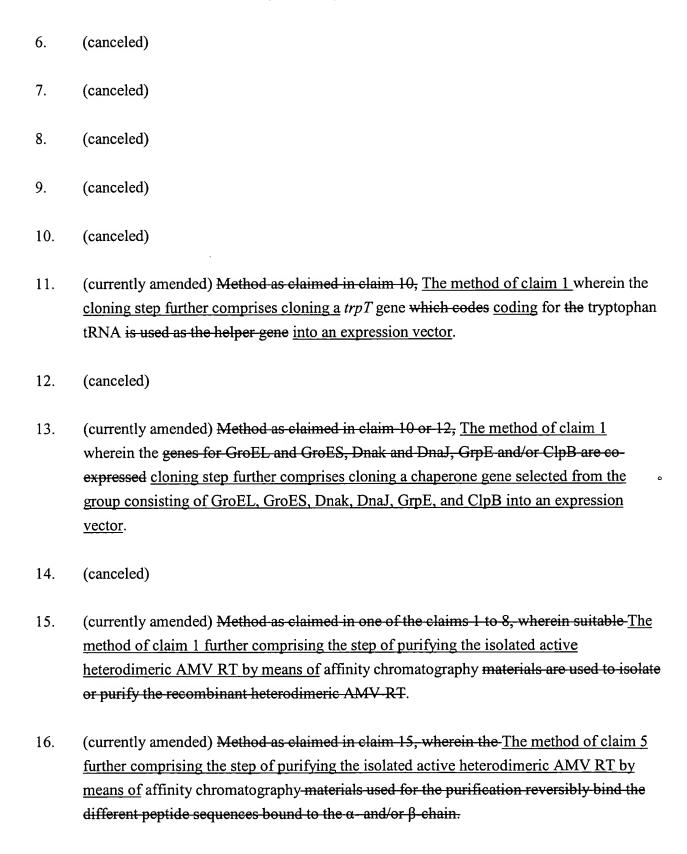
- 1. (currently amended) <u>A method Method</u> for producing an active heterodimeric <u>avian</u> <u>myeloblastosis virus reverse transcriptase (AMV RT)</u> <u>AMV-RT in prokaryotic host cells, wherein comprising:</u>
 - one or several DNA sequences(s) which code for the α- and/or β-chain of the AMV-RT are cloned in expression plasmids cloning, individually or in combination, a DNA sequence coding for an α subunit of AMV RT, a DNA sequence coding for a β subunit of AMV RT, a lacIq gene, and a dnaY gene, into one or more expression vectors,
 - (ii) the expression plasmids are transformed in prokaryotic cells transforming the expression vectors into *E. coli* host cells,
 - the soluble expression of the heterodimeric AMV RT is induced incubating the host cells under conditions suitable for expression of the α and β subunits of AMV RT, and
 - (iv) <u>isolating</u> the <u>recombinant</u> <u>active</u> heterodimeric <u>AMV RT</u> <u>AMV RT is isolated</u> from the cells.
- 2. (canceled)
- 3. (canceled)
- (currently amended) Method as claimed in one of the claims 1 to 3, The method of claim
 1 wherein the α as well as the β chain is fused with sequence coding for the α subunit of
 AMV RT further codes for a peptide sequence comprising from 2 to 10 arginine residues.
- 5. (currently amended) Method as claimed in claim 4, The method of claim 1 wherein the αor β-chain is fused with a peptide sequence coding for the α subunit of AMV RT further
 codes for a peptide sequence comprising from composed of 2 to 10 arginine residues and
 the β-or α-chain is fused with sequence coding for the β subunit of AMV RT further
 codes for a peptide sequence composed of comprising from 2 to 10 histidine residues.

17.

(canceled)

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- 18. (currently amended) Method as claimed in one of the claims 1 to 17, The method of claim

 1 wherein the DNA sequence SEQ ID NO: 5 or DNA sequences coding for the α subunit

 of AMV RT comprises SEQ ID NO: 4 and the DNA sequence coding for the β subunit of

 AMV RT comprises SEQ ID NO: 5 are expressed in a prokaryotic host cell.
- 19. (canceled)
- 20. (currently amended) Method as claimed in one of the claims 1 to 19, The method of claim

 1 wherein the active heterodimeric AMV-RT AMV RT isolated from the cells is

 composed comprised of the subunits an α subunit comprising SEQ ID NO: 6 and a β

 subunit comprising SEQ ID NO: 7.
- 21. (canceled)
- 22. (new) The method of claim 1 wherein the sequence coding for the β subunit of AMV RT further codes for a peptide sequence comprising from 2 to 10 histidine residues.